

EXHIBIT F

Joyce Report

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**Revised Silica Sand Extraction Volume Estimates
Juan Piza Blondet Property
Barrio Guarico Viejo, Vega Baja
Puerto Rico**

Submitted on behalf of
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To
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A Simple Permit (Sec. 2.47, "Permiso Simple") is defined as authorization emitted by the Secretary or authorized agent for small-scale excavation extraction or removal of earth materials, either for commercial or noncommercial purposes, up to a limit 1,000 cubic meters for sand and 5,000 cubic meters for other earth materials. Section 4.1 covers applicability and states that if the intended use of the excess material is commercial sales then the activity should be authorized under a formal permit. Section 4.2 covers required submittals; #9 states that if excess material is to be removed from the site and deposited elsewhere, a sworn statement is required from the recipient as well as any other applicable or corresponding authorizations. The present regulations leave open the possibility to sell silica sand as excess material when the extraction permit was granted for purposes other than commercial exploitation of the sand.

A Formal Permit (Sec. 2.45, Permiso Formal) is defined as authorization emitted by the Secretary or authorized agent for excavation extraction, removal and dredging of earth material components on a large scale or for commercial purposes, or when the magnitude or complexity of the operation merits a rigorous major technical and legal evaluation or study, whether or not it is for commercial purposes. The basic form of the permit for silica sand extraction requires an environmental evaluation, soil borings of 15 feet deep no more than 100 meters apart, and limits extraction to the depth of the phreatic or ground water level and to within 10 meters of the adjacent wetlands as delineated by the COE (U.S. Army Corps of Engineers).

Permission to extract silica sand below the ground water level requires a complete Environmental Impact Statement, analysis of groundwater flow pattern and potential impact on any water wells within 500 meters. Sand extraction pits are limited in size to less than 1200 square meters and in depth to 4 meters below the groundwater level and must be at least 10 meters away from adjacent wetlands as delineated by COE. The extraction pits must be filled with limestone or igneous-volcanic rock simultaneous with extraction and the location of the intended fill material must be documented in the permit application.

The site conditions are and were at the time of taking overall favorable to obtain silica sand extraction permits. The Laguna Tortuguero Reserve lies about 1 kilometer away from the site and is separated by a topographic high greater than 5 meters. Therefore any development or extraction at the site would have no impact on the nature preserve. The required 10 meter buffer zone would restrict any impact on the adjacent wetland areas. The boundary between the two is clearly defined by an abrupt change in vegetation and soil as seen in photo 3 below.